

# Comparisons of Job Characteristics

**Focus Occupation:** Architects, Except Landscape and Naval (17-1011)

**Associated Occupation:** Civil Engineers (17-2051)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 79

**Focus Occupation:** Architects, Except Landscape and Naval (17-1011)

**Associated Occupation:** Civil Engineers (17-2051)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Engineering and Technology	5.7	24.5	20.3	<< Extensive education and/or training may be required
Design	5.2	23.4	25.0	0 Current knowledge level may be sufficient
Building and Construction	4.0	21.6	22.4	0 Current knowledge level may be sufficient
Mathematics	9.2	20.0	11.4	<< Extensive education and/or training may be required
Physics	4.3	15.8	8.8	<< Extensive education and/or training may be required
Transportation	4.6	13.9	5.8	<< Extensive education and/or training may be required
Administration and Management	8.4	13.0	14.9	> Current knowledge level is likely sufficient
Public Safety and Security	6.9	12.6	14.2	> Current knowledge level is likely sufficient
Law and Government	5.9	11.3	13.4	> Current knowledge level is likely sufficient
Chemistry	4.8	10.8	4.7	<< Extensive education and/or training may be required
Geography	3.9	9.7	8.2	< Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 89

**Focus Occupation:** Architects, Except Landscape and Naval (17-1011)

**Associated Occupation:** Civil Engineers (17-2051)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
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Mathematics	6.2	15.7	11.7	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	14.6	12.7	<	A higher skill level may be required
Complex Problem Solving	9.1	14.5	14.5	0	Current skill level may be sufficient
Judgment and Decision Making	9.4	14.5	14.6	0	Current skill level may be sufficient
Science	4.5	11.9	7.2	<<	Extensive development of skills in this area may be required
Systems Analysis	6.5	11.7	9.4	<	A higher skill level may be required
Systems Evaluation	6.4	11.7	9.9	<	A higher skill level may be required
Management of Personnel Resources	6.9	11.2	10.3	0	Current skill level may be sufficient
Management of Material Resources	3.7	9.1	8.8	0	Current skill level may be sufficient
Management of Financial Resources	3.3	8.9	9.5	0	Current skill level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 97			
Focus Occupation: Architects, Except Landscape and Naval (17-1011) Associated Occupation: Civil Engineers (17-2051)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Problem Sensitivity	11.1	15.4	15.5	0	Current ability level may be sufficient
Deductive Reasoning	10.6	15.2	16.5	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	14.9	12.4	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	14.4	13.9	0	Current ability level may be sufficient
Visualization	7.5	14.1	16.9	>	Current ability level is likely sufficient
Number Facility	6.3	13.9	13.4	0	Current ability level may be sufficient
Information Ordering	9.9	13.8	14.8	0	Current ability level may be sufficient
Category Flexibility	9.0	13.4	13.9	0	Current ability level may be sufficient
Flexibility of Closure	7.8	13.3	12.5	0	Current ability level may be sufficient
Perceptual Speed	7.4	11.8	10.6	<	Some improvement in abilities may be required
Speed of Closure	5.9	9.9	10.1	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 98
Focus Occupation: Architects, Except Landscape and Naval (17-1011) Associated Occupation: Civil Engineers (17-2051)		

Work Activities	Exclusivity of Activity
Advise clients or customers	19
Advise clients regarding engineering problems	67
Analyze project proposal to determine feasibility, cost, or time	69
Analyze scientific research data or investigative findings	27
Analyze technical data, designs, or preliminary specifications	47
Bid engineering, construction or extraction projects	80
Communicate technical information	4
Compute production, construction, or installation specifications	58
Confer with engineering, technical or manufacturing personnel	25
Convert design specifications to cost estimates	89
Coordinate engineering project activities	71
Delegate authority for engineering activities	73
Design construction projects	81
Determine specifications	67
Develop or maintain databases	30
Develop plans for programs or projects	31
Develop policies, procedures, methods, or standards	21
Develop tables depicting data	33
Direct and coordinate activities of workers or staff	3
Direct personnel in support of engineering activities	74
Draw maps or charts	69
Draw prototypes, plans, or maps to scale	57
Estimate cost for engineering projects	69
Estimate time needed for project	64
Evaluate costs of engineering projects	70
Evaluate engineering data	60
Explain complex mathematical information	30
Inspect facilities or equipment for regulatory compliance	51
Inspect project operations, or site to determine specification compliance	72
Interpret aerial photographs	69
Interpret maps for architecture, construction, or engineering project	77
Judge distances	89
Lead teams in engineering projects	73
Plan construction of structures or facilities	75
Prepare reports	8
Prepare technical reports or related documentation	22
Read blueprints	10
Read maps	42
Read technical drawings	7
Recognize construction industry codes or symbols on blueprints	87
Resolve engineering or science problems	46
Understand construction specifications	53
Understand engineering data or reports	48
Understand government construction contracting regulations	87
Understand property documents	77
Use building or land use regulations	65

Use computer aided drafting or design software for design, drafting, modeling, or other engineering tasks	58
Use computers to enter, access or retrieve data	3
Use drafting or mechanical drawing techniques	50
Use field notes in technical drawings	78
Use government regulations	44
Use knowledge of investigation techniques	16
Use knowledge of regulations in surveying or construction activities	78
Use land surveying techniques	80
Use mathematical or statistical methods to identify or analyze problems	30
Use project management techniques	47
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18
Use technical regulations for engineering problems	61
Use word processing or desktop publishing software	17
Write business project or bid proposals	48

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 80

**Focus Occupation: Architects, Except Landscape and Naval (17-1011)**  
**Associated Occupation: Civil Engineers (17-2051)**

Tools and Technologies	Exclusivity
Business function specific software	1
Cameras	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Drafting supplies	9
Duplicating machines	6
Industry specific software	1
Information exchange software	1
Measuring and layout tools	3
Network applications software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.